

REMARKS

Drawing Objections

Applicant has canceled claim 16 without prejudice. Accordingly, the objection to the drawings regarding the fusion zone has been traversed.

Specification Objections

Applicant has amended paragraphs [0021] and [0022] to correct misnumbered reference numerals therein, per the Examiner's directive. Accordingly, the objection to the specification has been traversed.

Claim Rejections Under 35 USC § 112, first paragraph

Applicant has amended claim 12 to more clearly recite the fusion zone as being tapered and having a wave form. There is clear support for this amendment in the originally filed application, and thus, no new matter has been added. Accordingly, the rejection is believed to be traversed, and the amended claim to be in proper condition for review on the merits.

Claim Rejections Under 35 USC § 112, second paragraph

Applicant has amended claims 9 and 11 to resolve antecedent basis problems by changing the term "carrier member" to "carrier element". Accordingly, the rejections are believed to be traversed, and the amended claims to be in proper condition for review on the merits.

Claim Rejections Under 35 USC § 102(b)

Applicant traverses the Examiner's rejection of claims 9-13 as being anticipated by Antonini (US 4,588,195, referred to hereafter as "Antonini"). To more clearly distinguish over Antonini, claim 1 has been amended, whereupon Applicant believes the rejection should be withdrawn and the claims allowed.

As amended, claim 9 recites a housing closing cover having a carrier element with a generally planar bottom surface to be positioned against a mating component and an opening in the carrier member. A fluid seal is mounted in the opening of the carrier

element. The fluid seal has an annular axial sealing lip facing in the axial direction of the opening adjacent an edge of the opening axially outwardly from the bottom surface of the carrier element to provide a static face seal between the housing and the mating component. The fluid seal also includes an annular radial sealing lip attached to the axial sealing lip and extending in a radial direction from the axial sealing lip for sealing a member projecting through the opening. The radial sealing lip is supported for angular and radial movement relative to the carrier without significantly impairing the sealing lip about the member projecting through the opening.

In contrast, Antonini provides a seal assembly 10 having a metallic case 14 with a radially extending annulus 36 and an axially extending outer body 38 for press fit into a bore 40 (Col. 2, lines 57-65). The assembly further has an elastomeric body 12 molded to the case 14 to provide a radial sealing lip 20 arranged for engagement with a shaft 18 (Col. 2, lines 32-34). The sealing lip is located axially inwardly from the radial annulus 36 by an axially extending first annulus 26. Nowhere is there disclosure or a suggestion of a second sealing lip, let alone an axial sealing lip extending outwardly from the radial annulus 36 to provide a static face seal. The Examiner has elected to refer to the flexible body portion 12 as defining an axial sealing lip. This is not accurate. The only sealing lip provide by the body portion 12 is the radial sealing lip 20. Not only doesn't Antonini have a seal lip facing in an axial direction providing a static face seal, as claimed by Applicant, but there is nothing to suggest such a seal would be incorporated into the seal assembly 10. The seal assembly 10 provides a dynamic seal against the shaft 18 and nothing more. To modify Antonini in an effort to arrive at Applicant's claimed closing cover requires improper hindsight in view of Applicant's disclosure. Further, to modify Antonini requires changing the case 14 of Antonini from being configured for mounting in a cylindrical bore 40 to being face mounted, which is nowhere suggested or contemplated in Antonini.

Accordingly, amended claim 9 is believed to define patentable subject matter and to be in proper form for allowance. Such action is respectfully requested.

Claims 10-13 are ultimately dependant upon amended claim 9, and thus, are believed to define patentable subject matter for at least the same reasons and to be in proper form for allowance. Such action is respectfully requested.

Claim Rejections Under 35 USC § 103(a)

Applicant traverses the Examiner's rejections of claims 14-16 as being obvious over the various references cited, Antonini, Phillips, Phelps and Cather, whether considered separately or in combination with one another, where proper, for at least the same reasons discussed above in connection with amended claim 9.

Accordingly, claims 14-16 are believed to define patentable subject matter and to be in proper form for allowance. Such action is respectfully requested.

New Claims

Claims 17 and 18 have been added, and are ultimately dependent on amended claim 9, and thus, are believed to be allowable for at least the same reasons stated above in support of amended claim 9.

Claim 17 further recites the radial sealing lip being substantially radially aligned with the carrier element. Claim 18 is dependent upon claim 17, and further provides a wave shaped fusion zone extending generally coplanar with the carrier element to connect the static face seal to the axial sealing lip.

None of the references cited provide the claimed structure of new claims 17 and 18, and thus, these claims are believed to provide additionally patentably distinct subject matter over all the references, whether considered separately or in combination with one another, where proper. Accordingly, allowance of claims 17 and 18 is respectfully requested.

It is believed that this application now is in condition for allowance. Further and favorable action is requested.

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AMENDMENT

The Patent Office is authorized to charge or refund any fee deficiency or excess to
Deposit Account No. 04-1061.

Respectfully submitted,

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Date

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